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ABSTRACT

The purpose of this study was to determine if an intervention package designed to develop the administrative and managerial skills of women vocational educators would change their ascriptions to resemble those of male high achievers. The independent variable was a 2-week residential institute held in June 1982. The dependent variable was attributions as measured by the Trent Attribution Profile. Candidates were selected in a highly competitive process and then randomly assigned either to the control (N=26) or intervention (N=24) group. The hypotheses that as a result of the Institute the participants would increase their attributions to ability in self-success attributions and decrease their ascriptions to ability for self-failure situations were not supported. Failure to find positive results for self-success was thought to be due to a ceiling effect and lack of sensitivity in the instrument; for self-failure, a lack of emphasis in the Institute's program on perceptions of failure of situations was blamed. The participants did increase ascriptions to luck in self-success situations, a finding which was unexpected. Further research on the Trent Attribution Profile revealed a correlation between luck and ability for high-need achievers. This positive finding was considered to be both significant and desirable. (Author/ABL)

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Changing Women's Ascriptions Through a Leadership Training Program

by

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Abstract

The purpose of this study was to determine if an intervention package designed to develop the administrative and managerial skills of women vocational educators would change their ascriptions to resemble those of male high achievers.

The independent variable was a two-week residential institute held in June, 1982. The dependent variable was attributions as measured by the Irent Attribution Profile. Candidates were selected in a highly competitive process and then randomly assigned either to the control (N=26) or intervention (N=24) group. The design of the research was post-test only with a control group. Data were analyzed with the Mann-Whitney U, large sample, with a correction for tied scores.

The major hypotheses were that as a result of the Institute the participants would increase their attributions to ability in self-success situations, and decrease their ascriptions to ability for self-failure situations. Neither hypothesis was supported. Failure to find positive results for self-success was thought to be due to a ceiling effect

and lack of sensitivity in the instrument; for self-failure a lack of emphasis in the Institute program on perceptions of failure situations.

The participants did increase ascriptions to luck in self-success situations which was an unexpected finding. Further research on the Trent Attribution Profile revealed a correlation between luck and ability for high-need achievers. This positive finding for a covariant of ability in self-success situations was considered to be a significant and desireable finding.

CHANGING WOMEN'S ASCRIPTIONS THROUGH A LEADERSHIP TRAINING PROGRAM

Most agree that the barriers to women's advancement in society and in the work force have been mainly external (e.g., Fuchs, 1971; Laws, 1979). Consequently, corrective measures have focused on advancing opportunities through legislation and affirmative action in education and the workplace (Deaux & Emswiller, 1974; Frieze, 1975). Internal factors, or women's view of themselves and their roles in society, have been posited as additional constraints on achievement. Women's perceptions (accurate or not) that they exercise limited control over their environment and fates may serve as inhibitors to the full development of career potential.

Weiner (1974) and others (e.g., Arkin & Maruyama, 1979; Feather, 1965; Kukla, 1972; Weiner, 1974a; Weiner & Kukla, 1970) have found that high achievers attribute their successes to internal factors (ability and effort) whereas low achievers have no stable ascription pattern for success

events. When experiencing failure, high achievers attribute it to lack of effort; low achievers to lack of ability. In addition, Weiner (1974) contended that attributions to stable elements (ability and task difficulty) increase typical expectancy changes due to past experiences with success and failure, while attributions to unstable elements (effort and luck) reduce the magnitude of expectancy changes.

In comparing male and female groups a consistent finding, at least until recently, has been that females of all ages have lower initial expectancies for success than do males (Cole, King & Newcomb, 1977; Crandall, 1969; Frieze, 1980; Frieze, Parsons, Johnson, Ruble & Zelman, 1978; Gjesme, 1973; Mednick, Note 1; Stipek & Hoffman, 1980). These lower expectations may have debilitating effects on future task performance (Frieze, Fisher, Hanusa, McHugh, & Valle, 1978; Mednick, Note 1) and may lead to self-fulfilling prophecies of causal attributions (Frieze, 1980). When women experience success they typically ascribe that event to the internal, unstable element of effort (Mednick, Note 1). Thus, any success experienced is not viewed as either stable or necessarily likely to recur without once again exerting effort (Mednick, Note 1).

Women reportedly have a greater tendency to ascribe failure to lack of ability than do men (Bar-Tal & Frieze, 1977; Dweck & Reppucci, 1973; Feather, 1969; Mednick, Note 1). These attributions of success to external elements and failure to internal elements may result in women feeling less pride in their successes and more shame in their failures (Frieze, 1975), thereby producing lower expectations of success experiences. Mednick and Tangri (1972) have argued that the need for achievement in women was superceded by the need for affiliation. If women limit their opportunities to fulfill achievement needs to those situations in which their primary need for affiliation can also be met, they also may experience less real success.

The combination of little reinforcement for success and more intense shame for failure, coupled with high needs for affilitation and a general societal resistance to sex-role change (Mednick, 1975), may well have kept many women from responding to high achievement needs. This then furthers the stereotype that men are basically more competent than women in a variety of achievement situations (Frieze, 1980). The question for those interested in increasing women's actual achievement to match their potential becomes how to transcend these internal barriers (assuming that societal constraints are reduced).

This study explored an approach to change women's ascriptions and eliminate one potential block to realization of career achievement. We attempted to determine if a two-week training program, designed to enhance women's administrative skills and increase their aspirations to assume leadership roles, could counteract this presumed attitudinal/motivational handicap. The intent was to shift attributions of causality for events so that they resembled the ascriptions frequently reported for high achieving males, i.e., successes are due to ability and effort, failures to lack of effort (Weiner, 1974).

The participants for this leadership institute were identified by their supervisors as especially capable of assuming greater responsibility in their organizations. We recognized that previous research on change in attributions involved highly specific short-term shifts of behavior displayed in laboratory settings. Ambitiously, we undertook the modification of broad-based patterns of ascription for life events.

METHOD

Participants

To apply to attend the Institute candidates' directors and deans had to nominate them on the basis of high adminis-

trative potential. From more than 100 candidates, 53 women (vocational education teachers from public schools and community colleges) met the criteria for acceptance and were then randomly assigned to either the treatment (N=27) or control (N=26) group. The two groups were reasonably matched for age, race, years of teaching experience and areas of expertise. Three women who had been pre-selected as participants for the Institute were eliminated from the study, yielding a treatment group of 24 women.

Instrumentation

Although there were a number of instruments available to measure attribution, most lacked evidence of validity and reliability (Elig & Frieze, 1979). The Irent-Attribution Profile (Wong, Watters, & Sproule, 1978) was chosen because its psychometric properties showed that, though far from ideal, it was the best available instrument since it overcame the limitations of a forced-choice format (Wong & Sproule, Note 2). It was also consistent with research indicating that scale methods are the instruments of choice for measuring attribution (Elig & Frieze, 1979).

Procedure

An Institute, "Preparing Women for Careers in Vocational Administration," was conducted on the University of South Florida's New College Campus in Sarasota during mid June, 1982. The two women instructors (both professors, one in Psychology and Education, one in Management), male adminstrative aid, and 27 participants resided together in a dormitory and met formally for 6-10 hours each day for 10 working days. They were joined by speakers and visitors who served as additional role models and experts. Program content centered on three areas: organization theory and management techniques, sex equity in education and work (especially non-traditional work roles), and career development of the participants. Many activities were intended to increase self-confidence and encourage positive attitudes toward personal achievement. The teaching-learning design encompassed cognitive and affective objectives and employed experiential methods, such as simulation games, role playing, etc., reading, lecture-discussion, and case analyses. The program was an adaptation of an Institute (conducted since 1975) that had been shown to be effective in raising aspirations and increasing attitudes toward expanding women's roles at work

and in society. (For details of the program content and process see Kimmel, Harlow, and Topping, 1979)

Intervention to Change Attribution Patterns. In order to foster an understanding of the possible internal barrier to female achievement of interest here, a two-hour formal session on the second day reviewed current research on attribution. In particular data on the ascription patterns of high-need achievement males was contrasted with those of females. Data about observers' ascriptions of both males' and females' successes and failures illustrated the external barriers that these ascriptions may present to women who aspire to leadership.

Participants were encouraged to analyze and, where appropriate, reshape ascriptions so they might resemble (or surpass) those of high need-achievement males. The staff assigned women "participant buddies" who aided in increasing awareness of ascription behavior. Each woman then developed a set of personal objectives for the Institute. At each subsequent day's end, she reviewed this set of goals and recorded in a log what she achieved that day and what more she wished to achieve. In addition to maintaining the daily log of gains, women were asked to "own" their successes, analyse any failures, and share these attributions with

"buddies", who were to reinforce desirable, confidence-building attributions and challenge negative statements about performance.

At the end of the Institute the women who attended were given the Irent Attribution Profile (IAP) (Wong, Watters & Sproule, 1978). The same version of the test had been mailed to the non-treatment group (which acted as a waiting list) immediately after they had been determined. In effect the control group answered the IAP an average of 3-4 weeks before the experimental group, late May versus late June. The design of the study was thus quasi-experimental, post-test only, control group (Campbell & Stanley, 1963).

One year subsequent to the Institute, the participants were brought together in Orlando to meet with the women and men who sponsored their attendance to the program. This follow-up session lasted one day and night and focused on the mentor-mentee career planning, more intensive networking, discussion of barriers to advancement and ways to overcome them, and ended with the participants re-taking the IAP to ascertain any changes over time.

Results

Attribution Data

The first major hypothesis was that the women participating in the Institute would show higher ascriptions to ability for self-success situations compared to the control group as a result of the Institute experience. Table 1 presents the mean scores, standard deviations, and variances of both the control and intervention groups and for Wong's participants in self-success situations for the four areas (ability, effort, task difficulty, luck) measured by the Trent Attribution Profile.

Table 1 about here

Inspection of Table 1 shows that both groups of women were: highest in ascriptions to effort (Xs = 13.62 vs. 12.88), slightly lower in ascriptions to ability (12.96 vs. 12.50), substantially lower in ascriptions to task difficulty (7.25 vs. 7.54), and lowest in ascriptions to luck (7.62 vs. 6.08). When these figures are compared to a study by Wong (Note 2) (ability = 11.58, effort = 12.18; task difficulty = 7.56, and luck = 7.71) of a group that is more representative of the general population, one can see that women in this study were higher in their ascriptions to internal

factors (ability and effort) and fairly similar in their ascriptions to external factors.

Because the data did not meet the underlying assumptions of parametric tests, the nonparametric Mann-Whitney U, large sample, with a correction for tied scores was used. The Z scores showed no significant differences for ability, effort, and task difficulty between the participant and control women. Thus, the first major hypothesis was not confirmed. The participants' scores on attribtions to luck were significantly higher than the controls', however. This was an unexpected outcome and contrary to the intended impact of the program, although both group's scores on luck were quite low generally, which was a desireable finding.

The second major hypothesis was that women participating in the Institute would show lower ascriptions to ability for self-failure situations when compared to the control group. Table 2 presents the mean scores, standard deviations, and variances of both the control and intervention groups as well as for Wong's subjects for self-failure situations.

Table 2 about here

Both women's groups were almost equally high in their ascriptions for self-failure situations to ability (9.46 vs. 9.88), effort (10.04 vs. 10.15), and task difficulty (10.96 vs. 10.88), and quite low in their ascriptions to luck (5.62 vs. 5.12). There were no significant differences between any pair of means. Comparing these data to Wong's (Note 2), it is apparent that the women in this study were lower in ascriptions to ability and luck, somewhat lower to effort, and higher to task difficulty.

Overall, in both success and failure situations women, in this study were lowest in their ascriptions to luck. However, in failure situations task difficulty was given nearly the same weight as ability and luck, but substantially less than ability and luck in success situations.

To assess the degree to which the Institute met its stated goals, a package of instructor-designed and standardized instruments was administered. Additionally, each person rated the overall progress she made toward achieving personal goals during the program. Written and oral "products," such as resumés, videotaped interviews, logs of daily progress, participation in class and networking also produced evidence of program effectiveness. Generally, this short-term evaluation revealed that a cohesive cadre of

27 women was formed. The participants were clearer about their career goals, most (24 of 27) of which included movement into leadership positions in vocational education, and expressed intentions to complete the educational steps necessary to pursue the next step on the careeer path.

At the follow-through meeting in 1983, the women reported that they started and/or completed the educational activites required to obtain certification for an administrative post as they had intended in 1982 (24 of 27 had taken the next educational steps). Several women had applied for a leadership position, some had made lateral transfers and at least one had gone into business, though no one had achieved a promotion. Most women had become more active in professional associations and earned offices or committee chairs, and a number were engaging in private consulting. With respect to the latter, the group developed a consultant resource document listing their areas of expertise and experience that they could refer to in the event their schools or colleges needed a consultant. Thus, it would seem from the women's behavior that the program at least did not inhibit their motivation and possibily stimulated their efforts to advance.

Discussion

An attempt was made in this study to modify or reduce what many have perceived to be an internal barrier to women's achievement. Women, identified by their superiors as having leadership potential, were selected and then randomly assigned to participate in, or be placed on a waiting list for a summer training program. Despite a didactic review of research on attribution, a daily exercise to sensitize the participants to their ascription behavior, and rewarding (through a buddy's encouragement) "healthy" patterns, there were no important intended differences in IAP scores between those attending the institute and those not. In fact women in both groups resembled male high-need achievers in success ascriptions on the IAP, believing that their successes were caused mainly by the internal elements of effort and ability, and were little influenced by task difficulty and luck. The design of this study (post test, control group) precluded administration of the IAP to participants prior to the program. This lack of difference with males found here is consistent with recent findings (e.g., McHugh, Frieze, & Hanusa, 1982), available after our study was conducted, that also failed to show sex differences reported in earlier studies.

Mednick (Note 1) recently cautioned that only women's public ascriptions may differ from those privately held, that more nearly conform to those of men. In situations of failure, however, neither group of women educators resembled male high-need achievers whom most studies report as ascribing their failures mainly to lack of efffort. Women in this study indicated their failures were due almost equally to the elements of ability, effort and task difficulty, and were only slightly influenced by luck.

The women who participated in the Institute were significantly more likely than controls to ascribe self-success situations to luck, but this change was in the opposite direction expected or wanted. In a subsequent private communiqué, the author of the instrument (Wong, Note 3) reported a covariance of luck and ability in self-success situations in people who are high in need for achievement. Thus, it is possible that the Institute did have the expected impact on both luck and ability attributions, but that the IAP, due to a ceiling effect, was able to reflect the change only in the luck attribution. It appears that the Irent Attribution Profile is an insensitive instrument for measuring the types of changes we intended to produce. Indeed, it appears that one's scores in the IAP are more in

the nature of trait than state measures, for the re-test data of the participants taken one year following their attendance of the program (at the follow-up meeting) showed virtually no changes in either success or failure attribution scores. This can be interpreted that the program made no impact of the type detectable only after a significant passage of time or that the measure simply is not reactive. Both groups involved in the present research were above Wong's reported means (Note 2) in ascriptions to ability in self-success situations, and below the means in ascriptions to ability in self-failure situations. Since the ceiling of the instrument for all single attributions is only 15, there was a limit to the possible increase for the intervention group, i.e., control women had a mean score of 12.50, above that of Wong and Sproule's subjects, leaving only 2.50 points to move. Further, the instrument contains only three questions for each of the four areas (ability, effort, task difficulty, and luck). This small sampling of the behavior limits the validity of the instrument (Guilford, 1954) and, alone, may have created insensitivity to any changes produced by the program for the intervention group (whose mean was 12.96).

The ceiling effect was not a potential problem for self-failure situations, however. One possible explanation for lack of intended results here could be that the Institute program concentrated on perceptions of success events, e.g., "buddies" were to share success experiences, participants interacted with successful role models, and focused on achieving successes, but gave scant attention to the desireable interpretation of failure situations. The only references made to dealing with failure in the Institute occured during the session describing attribution theory and in passing comments as to reasons for failure.

Failure to find the expected differences between the participant women and their controls could suggest that the Institute as designed did not constitute an intervention of sufficient power to change success and failure ascriptions. While the faculty attempted to meet the conditions to induce change as decribed by Bandura (1977), Cartwright (1951), and Kelman (1961), it is only conjecture that the program in fact met their criteria.

It is possible that control group women, when completing the IAP, were more motivated than the treatment group to answer in a socially desireable manner. They were never rejected as unqualified, but told they were placed on

a waiting list. They could have interpreted that as making them competitive for any vacancies that might arise (a true situation since the staff intended every space to be filled). That attendance was prized at this all-expense-paid institute is supported by the fact that nearly 100 women applied prior to the program's start. Thus, they may have viewed the IAP as a criterion for eventual acceptance/rejection and not have answered with total veracity. This potential tendency toward responding in a socially desireable manner combined with the fact that the control women took the IAP in the familiar surroundings of their homes and at their leisure, while the participants took the instrument as the first in a lengthy battery of nine tests in the classroom on the last day, may have influenced the results in some undetermined way.

Finally, it can be argued that the women in this study were not representative of women in general. Since the process for becoming a nominee and being selected for the Institute was rather rigorous, it is likely that the teachers chosen were unusually competent and already possessed the success ascription patterns that the Institute was hoping to shape.

Several practical implications can be drawn from this study. First, future training program organizers who attempt to change ascriptions, of women or men, must ascertain first (through pre-testing with an instrument such as the IAP) baseline patterns of ascription to ensure that they are in "need" of modification. The design of this research study prohibited this possibility. If the pretest scores warrant modification to a "healthier" pattern, an intervention of greater potency than the one described here may be required, or a similar program to ours should be run for a longer period of time. Even if the participants display initially positive ascriptions (as the women in this study did for success events) that the program directors wish to enhance further, they should ensure that they select/design an instrument that avoids the shortcomings (i.e., few items per factor or ceiling effects) of the Irani-Attribution Profile.

Despite the shortcomings of the present intervention attempt and/or the available instruments for determining its psychological impact, there is a continuing need for others to establish the nature of psychological barriers to women's achievement and implement effective practical strategies to overcome them.

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Table 1
Mean Ascriptions in Self-Success Situations
of Intervention and Control Groups

	Intervention	Control	Z Score	Wong's Subjects
	N = 24	N = 26		N = 120
Ability				
Mean	12.96	12.50	-.98	11.58
Standard Deviation	1.49	1.48		
Variance	2.22	2.18		
Effort				
Mean	13.62	12.88	-1.20	12.18
Standard Deviation	1.24	.99		
Variance	1.55	.99		
Task Difficulty				
Mean	7.25	7.54	1.29	7.56
Standard Deviation	2.31	1.42		
Variance	5.33	2.02		
Luck				
Mean	7.62	6.08	-2.41*	7.71
Standard Deviation	2.48	1.96		
Variance	6.16	3.83		

*p < .05